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ABSTRACT

Solano Community College (California) developed interdisciplinary, team-taught classes called Learning Communities. Initially, all learning communities integrated College Composition (English 1) classes with introductory classes in other disciplines. As the program evolved, learning communities were created that integrated more advanced English classes (Critical Thinking, Creative Writing) and one class that did not involve English. Twenty teachers, more than 200 students, and 9 administrators participated in or were touched directly by the program, which is continuing. Qualitative results suggest that students feel more "heard" in learning community classes and experience more in-depth contact with teachers, other students, and the material being studied than is true in traditional classes. Quantitative results indicated that the reading and writing skills of learning community students showed substantial gains in contrast to those of students taking the same classes but not in a learning community format. The program has faced challenges finding a permanent home on campus against a background of assumptions that treat education as a business with a mission of cost containment, serving students as "customers." (RS)

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ED 413 612

Team Teaching of English Integrated with Content Area Courses: Final Report to the Fund for the Improvement of Postsecondary Education

Grantee Organization
Solano Community College
4000 Suisun Valley Road
Suisun CA 94585

Grant Number: P116B20717

Project Dates: August 1992- January 1996 (41 months)

Project Director:
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Grant Award

Year 1	$70,967
Year 2	69,784
Year 3	61,594
Total	202,345

CS 216 086

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I. Summary

Solano Community College's FIPSE grant supported development of interdisciplinary, team-taught classes called Learning Communities. Initially, all learning communities integrated College Composition (English 1) classes with introductory classes in other disciplines. As the grant evolved, we created learning communities that integrated more advanced English classes (Critical thinking, Creative Writing) and one that did not involve English. Twenty teachers, more than 200 students, and nine administrators participated in or were touched directly by the program, which is continuing. Qualitative results suggest that students feel more "heard" in learning community classes and experience more in-depth contact with teachers, other students, and the material being studied than is true in traditional classes. Quantitative results indicate that the reading and writing skills of learning community students showed substantial gains in contrast to those of students taking the same classes but not in a learning community format. The program has faced challenges finding a permanent home on campus against a background of assumptions that treat education as a business with a mission of cost containment , serving students as "customers."

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Summary of Program, report of FIPSE evaluation results, and sample course materials available.

II. EXECUTIVE SUMMARY: Team Teaching of English Integrated with Content Area Courses

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A. Project Overview: Our interdisciplinary, team-taught learning communities classes began when we integrated college-level writing classes with introductory classes in other disciplines to help students apply reading and writing skills outside the English classroom. As the program has evolved, we have realized the advantages of organizing the classes around a theme or question to help integrate the disciplines involved. We have also experimented successfully with integrating three disciplines in one learning community and with creating learning communities that do not include English (English is not the only field whose concepts and skills do not get applied outside the classroom where they are learned). Learning communities at Solano have become team-taught classes that integrate two or three disciplines to focus on a theme. In cases where an English class is integrated with a course from another discipline to form a learning community, we refer to the non English class as the "content" class because these classes tend to emphasize mastery of information through lecture. They differ in character from English classes, which tend to emphasize the process of reading and writing using content (topics, readings) that varies according to the preferences of instructors and students.

B & C. Purpose & Background and Origins: Learning communities at Solano were born in response to teacher frustration that the reading and writing skills learned in English classes did not transfer over to students' work in other areas. Our project was also designed to foster a sense of community among students at a commuter school located in the countryside and to overcome a sense of isolation felt by faculty.

D. Project Description: We originally planned to offer eight new learning communities, each one integrating college composition with an introductory course in another discipline (e.g. Introduction to Biology) and each one offered twice to give teams of instructors a chance to learn from their first attempts. Our evaluation profited from this design because we could assess each class during its second run -- presumably after the bugs had been worked out. We tested the beginning- and end-of-semester reading and writing skills of students in the learning community and of students taking the same two classes but not in a learning community format.

As the program evolved, we added three learning communities, one incorporating a word processing/computer class because of student demand, one incorporating a higher level English class so that students who liked their first learning community could move on to a second one, and one without an English component to help the program gain more support in the sciences where only one instructor had previously been involved and where the economic objections to learning communities were being loudly raised. In the fall of 1995 we also experimented successfully with offering a choice of levels of English (college composition or creative writing) within the same learning community. In the end, 20 faculty taught in 11 different learning communities, 7 of which were offered twice, for a total of 18 learning community classes. The classes emphasize active, collaborative learning rather than lecture, and all incorporate regular seminars and seminar papers about texts.

E. Evaluation/Results: Please see attached **Final Evaluation Report** for details. Highlights of that report include:

• Reading test scores of learning community students aggregated from all sections showed a statistically significant increase increase of 0.7 points from the beginning to the end of the semester, in contrast to a decrease of 3.5 points for students taking the same classes not in learning community format (see Table 1, attached Final Evaluation Report).

• Despite the increase in reading scores for learning community students, mean scores for both learning community and non learning community students remained below what is considered college level for the reading test used (the Degrees of Reading Power).

• Beginning- and end-of-semester essay test scores showed an overall gain of 3.2 points for learning community students and 1.4 points for non learning community students taking the same classes. The learning community students showed statistically significant gains in the four of the five areas of writing that we assessed: content, analysis, organization, and mechanics. Only synthesis, a higher order writing skill emphasized in advanced composition classes such as critical thinking, did not show statistically significant improvement among learning community students. The non learning community students showed no statistically significant gains in any of the areas evaluated; the area of greatest gain was in content, suggesting their knowledge of material studied in the content course (which was the class in which they took the writing test) had improved, but their writing skills, as exhibited in the content class, did not significantly improve even though they were also taking a separate college composition class. These results confirm our rationale for undertaking this project: students often do not carry what they learn in English outside the English classroom. Non learning community students began the semester in the "low" score category with a mean score of 15.1 out of 40 points, and remained in the low category at the end of the term with 16.5 points out of a possible 40. The mean score for learning community students rose from the low category, 17.5 out of 40 points, at the beginning of the term, to the "good" category, 20.7 out of 40 points, at the end of the term. (See Tables 1 & 2, attached Final Evaluation Report).

• Questionnaire results show that students in learning community classes talked with teachers and other students and participated in class through asking questions or contributing comments much more frequently than non learning community students. Learning community students also voluntarily worked with classmates on school work outside of class much more often than non learning community students. These results suggest that learning community students are more involved with their teachers and each other and experience a much more active learning environment than non learning community students. They appear to experience a greater sense of community at school than non learning community students. Written comments from non learning community students frequently expressed a longing for the opportunity to be more active, even when they appreciated the skill of the lecturer in their content class: comments often expressed the wish that lecture instructors would allow more chance for students to ask questions and talk about the material. (see Table 3, attached Final Evaluation Report).

In addition to the results of our formal evaluation, we have struggled with and learned a great deal about conflicts between administrative and teaching priorities. Depending on how you choose to count the beans, a learning community can appear on paper to cost $6,000 less or $36,000 more in faculty salaries than a non learning community class(es) serving the same number of students; both numbers are extreme and suggest the problem of trying to make decisions about curriculum and pedagogy based on simply trying to put price tags on the number of students apparently served and the amount of instructor time spent on an activity. Unfortunately, in thinking about education as a product, students as customers, and instructors as salespeople (or manufacturers? the metaphor breaks down at this point...) our campus and many others end up using data that are poor proxies for the real value of what happens in a classroom.

F. Summary and Conclusions In retrospect, we realize that we have embarked on creating the equivalent of a small alternative college within the larger college, taking on all

the problems and advantages associated with such an effort. While almost all the instructors and students who have been involved with the program feel it is a success and offers an important alternative to the "traditional" curriculum on campus, the program is still vulnerable to elimination in a climate of strained resources and shortsighted economic criteria for decision making. We are currently working to continue to build support for the program, to try to fill learning communities at new, higher maximum enrollments as a way to answer financial concerns about them, and wrestling with the compromise in pedagogy and classroom atmosphere that these higher enrollments represent. We are also trying to define a target population within the diverse student body and community we serve, so that we can hone the program to meet that population's needs.

G. Appendices: We are particularly grateful to our Program Officer, Cari Forman, for her support. Please see the end of this report.

III. BODY OF REPORT

A . Project Overview: Our interdisciplinary team-teaching project was born of teacher and student frustration. Teachers in fields other than English were frustrated that students who had had college writing classes wrote poorly on exams and papers in non English classes and did not do outside reading assignments. Students were frustrated by the need to take English when they wanted to major in fields that, in their view, did not require English skills, and were also frustrated by the "irrelevance" of English assignments like personal narratives and research papers. English teachers in turn were frustrated by students' resistance to assignments and students' less-than-enthusiastic fulfilling (or skipping!) of assignments as if the assignments were meaningless exercises. We also felt strongly that the fragmented, cafeteria-style course schedules that most students experience were not the best way to teach "real world" problem solving skills, which require using all of what we know rather than thinking in separate boxes of knowledge from different fields. We thought that the fragmented experience students have of seemingly unrelated classes and disciplines might play a role in their lack pf sense of connection to each other and the college and their satisfaction with the educational experience as something more than a bunch of requirements to be checked off. Although I am not sure we realized it at the time, the teachers were also lonely, feeling isolated in their own departments, lacking contact with colleagues in other disciplines.

We hypothesized that integrating English with another class would help students make the connection between the reading and writing skills learned in English and the work done in the non-English class. Assignments would become "relevant," at least insofar as they would count for the non-English class as well. We wanted to team-teach so the subjects would truly become integrated with joint activities and assignments and so students could see each teacher as a learner in the subject area outside his/her expertise. We wanted to establish the class as a community of learners all working together toward a common goal, minimizing the boundaries between the two disciplines as much as possible. A key reason for seeking grant support was the college's resistance to team teaching because of its perceived extra cost. We hoped our project would show that the extra dollars spent on two instructors working together would result in tangible benefits such as higher student retention, success, satisfaction and/or persistence in college. We eventually settled on "learning communities" as the name for our classes.

B. Problems Addressed

Although our definition of the problems we were trying to address remains essentially as described in Section A, the experience of offering 10 different learning communities (7 of them twice) has filled in a lot of fine details.

1. We discovered a surprising amount of student suspicion regarding learning communities because these classes were perceived as "different" from the normal curriculum and from students' expectations of what classes are like. Students often felt uncomfortable at first with the "alternative" (non lecture) atmosphere in learning community classrooms. Some students expressed a desire for more structure and a frustration with group learning and self-discovery activities rather than lecture where the teacher simply tells you what you need to know. Students were not necessarily prepared for the degree to which they were "exposed" in class as the learning process depended heavily on their preparation and sharing of homework. Students used to and comfortable with a classroom environment where the norm is lecture followed by "objective" (multiple choice, true-false, etc.) exams felt that learning communities were "more work" because students are asked to participate actively and take responsibility for uncovering ideas and discussing ideas and teaching each other. (Richardson, Fisk, and Okun in their book *Literacy and the Open -Access College* , San Francisco: Jossey-Bass, 1983, are well-known for describing this phenomenon of community college students commonly being asked to take in small bits of information from lectures and "regurgitate" them rather than to engage directly with texts and sustained arguments and think about these ideas for themselves.)

2. Students often did not know what to expect when they enrolled in a learning community in terms of classroom dynamics, \ and thematic/problem solving approaches to the material. Many students were surprised by the use of primary sources and seminar and other group/collaborative learning methods as well as reading and writing assignments in the learning community that did not offer English credit . This was despite frequent presentations by learning communities faculty and students to the counseling staff, so counselors could help students prepare. students reported that some counselors presented learning communities as a way to get an easy A while others described them as academically rigorous and challenging. One aid to students has been the adoption of thematic titles and descriptions for each learning community which now appear in the schedule of classes, so students at least know what the topic of the learning community will be rather that simply knowing that it integrates particular fields of study.

3. Although many administrators at Solano have been very enthusiastic about the idea of learning communities, their support has boiled down to this: "we think it sounds great, and if you want to go out there and make it happen, go ahead. We won't (deliberately) stand it your way, but we won't actively help you either." This position has left the faculty and students in learning communities with the burden of promoting the program and has also resulted in a number of administrative obstacles that, while perhaps not intentionally placed in the program's way, could easily have been avoided or resolved in a more actively supportive atmosphere. Those involved in the program had hoped that the administration would point to learning communities as something special, an asset to the college, rather than an innovation to be tolerated because faculty insist on pursuing it.

4. Faculty got worn out, especially as they taught their learning communities for the second time, by the amount of time needed to plan and coordinate with their teaching partner(s). One of the best negotiations we have had with the administration was on this issue; learning communities faculty now receive one class's worth of credit in their teaching loads to meet with their teaching partners during the semester. The potential for burnout was clear to all involved. Unfortunately, some faculty now perceive learning communities faculty as "getting away with an easy load" as a result. As a tradeoff for the faculty planning time, however, we agreed to increase learning community enrollments from 30 students per two-instructor teaching team to 50, a compromise that puts many of the positive features of the learning community classes -- smallness, intimacy, group activities rather than lecture -- at risk. (for

more analysis of this problem, please see Evaluation and Results, section 2, and Summary and Conclusion section, both below).

5. Faculty opposition to learning communities is encouraged by the metaphor used by the administration at Solano (and at many other California colleges) to put value on and make decisions about what goes on at the college. The college's planning, budget, and evaluation are based on the idea that the college is a business, that students are customers, and that maximum "productivity" for a dollar is essential. Emphasis is on things that can be counted and measured, on costs and bottom lines, on "efficiency" rather than quality. This kind of decision making is spawned by cuts in state support of community college and allotment of dollars to community colleges based on numbers of students served. In a learning community, then, the administration' s primary concern is the presence of two teachers in a classroom with one set of students for two class periods; this arrangement is seen by the administration exclusively as an issue of added cost. The qualitative benefits are not regarded are valued in decision making (nor are the costs of large, impersonal lecture classes; this discussion is a little like the discussion of how to incorporate into the cost of electricity the environmental benefits or damages of particular methods of generating it, so the price represents the qualitative costs and advantages of the power source). Departments are penalized in allocation of resources based on the number of faculty participating in a learning community because the student-faculty ratio of learning communities is smaller, and dollars follow larger numbers of students served more "cheaply" by fewer faculty. The system rewards large, impersonal lecture classes. These assumptions and criteria are pernicious; education is not a product to be sold and cannot be advertised and evaluated like cars or clothes. Nor can it be provided simply according to the desires of customers. If colleges only offer what students already want, how will students learn about new things that they don't want because they have never heard of them?

6. We discovered that, despite best intentions, teachers unused to teaching in teams need some kind of training for the experience of not being the sole authority figure in the classroom. Several teams developed the need for "marriage counseling" at various times during their work. As the grant progressed, we instituted more and more activities to offer a forum for addressing class and team problems as they arose and to try to head problems off in advance. We brought in experienced team-teaching faculty, students, and administrators from elsewhere as well as offering our own workshops and mini learning communities for faculty. One frequent response to our regular meetings of learning community teachers was this sentiment: "This is the ONLY meeting I go to where we talk about teaching!" The learning community teachers' experience of meeting together brought into sharp relief how much of what we do (including what goes on during the faculty development days that precede each semester) involves administrative and bureaucratic activities rather than activities related to teaching and learning.

7. Our college, like most today, is organized around the notion of separate disciplines and departments. The way the schedule is printed, the way books are displayed in the bookstore, the way classrooms and teaching loads are assigned, and the way funding is distributed are predicated on the assumption that classes in different disciplines are essentially unconnected. Learning communities, as they join together disciplines, classes, and instructors, run headlong into this contrary arrangement. For example, it took us three years to get the college bookstore to shelve each learning community's books together under the name of the learning community rather than having each instructor's books filed under his or her discipline. Although we finally this spring got an agreement from the scheduling office to present learning communities with their titles and brief descriptions in the schedule of classes so that students have information about what the classes involve, errors and missing

information have meant that the listings have not yet appeared correctly (another possible reason that the learning communities have not yet filled to capacity!) There are many other examples of how the learning communities challenge the campus system of getting things done, resulting in confusion, poor advertising for the classes, problems with classrooms and books, and other difficulties.

C. Background and Origins of Project

Solano Community College has about 8,000 students, the majority white and in their late 20's or early 30's, with a large program of night classes. The largest minority groups on campus are African American and Asian/Pacific Islander, including a substantial Filipino population. A high proportion of students test far below college level in both math and English when they arrive. Until recently the college was located between an Air Force Base and a Navy base (the Navy base has now closed), so many of our students were current or retired members of the military, their spouses, and dependents. The county is politically conservative. Almost all of our students and faculty come from at least a fifteen-minute drive away from the campus, which is located in the countryside near the freeway and outside any defined neighborhood or downtown area. As a result, there is little social life on campus. Students and faculty come, do their classes, and leave. Many faculty live an hour or more away in Sacramento, Berkeley, or San Francisco.

We are the only community college in our county, but there are three other community colleges within a half hour's drive, one that is similar to us in character, one that is more urban, and one that is wealthier and has a reputation for a high rate of student transfer to four-year schools. The faculty involved in our project thought, perhaps naively, that our innovative academic program emphasizing the support of two teachers for a community of students could become a highlight of our college, helping distinguish us from the other nearby schools. We could be seen as offering academic excellence in a supportive classroom environment.

The college has experienced a prolonged period of financial stress as the result of many state and local factors including the method by which community colleges in California are funded, essentially on the basis of numbers of students enrolled. The funding structure and the limits on public funds that date back to Proposition 13 in the early 1970's combine to encourage the college to think and plan according to the "business" model described in Section B. The result of this business model is that the administration's interests are in having teachers teach as many classes as possible, filled with as many students as possible -- not the most pedagogically sound approach to instruction and certainly not a friendly environment for classes that want to "double up" the teaching staff to serve one group of students together when each teacher alone could be teaching two groups (or three, once we factor in the planning time given to learning communities faculty).

Many faculty argue that declining enrollments (Solano has had as many as 11,000 students during the past ten years) come in part from student dissatisfaction with their experience of a commuter college where it is easy to feel lost, disconnected, without community, and without a support system to help students adjust to the culture and expectations of college which is often an unfamiliar world to students and their families. Creating an intimate environment with students together with two instructors for the equivalent of two class meetings rather than one seemed like a good approach to this problem. We believed that if we kept the English enrollment maximum of 30, we would retain more students through the semester and also into the next semester than we do in lecture classes with enrollments of 50 where students have little chance of feeling connected to each other, the material, or the instructor and have much less chance to express themselves than in a class where group work and self

expression through speaking and writing essays are valued as much as lecture and examinations.

We had experimented briefly with what we now call "Scotch taped" classes where the same students enrolled in two consecutive classes -- e.g., an English from 9-10 and a biology from 10-11. The classes were offered in different rooms, and although the instructors collaborated outside of class on related readings, the instructors were not present in the class together. We found that the students experienced the two classes as separate, not seeing many of the connections the instructors were excitedly discovering outside of class. In addition, the English class, with its more discussion oriented environment, became the location where students asked questions about the other class's material, and the English teacher often felt uncomfortable answering alone without the perspective of the other teacher, who, in the two cases we tried, emphasized lecture as the primary classroom mode. We tried three team-taught classes during the year that we were applying for our FIPSE grant. Our goal to get team taught, more integrated classes off the ground was reinforced by our experience with teaching together and seeing the students begin to understand the connections between the subjects being taught. Experimenting with the idea before we received grant funding to support a full-blown effort was invaluable in getting things underway with the short startup time between receiving the grant and the beginning of the first semester of funding.

D. Project Description

We originally planned to offer eight new learning communities, each one integrating college composition with an introductory course in another discipline (e.g. Introduction to Biology), and each one offered twice to give the team of instructors a chance to learn from the mistakes of the first attempt. Our evaluation profited from this design by assessing the beginning- and end-of-semester reading and writing skills of students in the class the second time a faculty team offered it (presumably after the bugs were out). The performance of learning community students was compared the performance of students taking the same two classes but not in a learning community format. (For more description of our evaluation please see the attached Final Evaluation Report). As soon as we advertised for faculty interested in participating, we got more than enough proposals to fill up our whole three years.

As the program evolved, we added three new learning communities, one incorporating a word processing/computer class because of popular student demand, one incorporating a higher level English class so that students who liked their first learning community could move on to a second one, and one without an English component to help the program become more established in the sciences where only one instructor had been involved up to that point and where the financial objections to learning communities were being raised loudly. (Science classes at Solano are often large lectures with several lab sections attached to serve all the students enrolled in the large lecture. These classes, therefore, bring in a lot of money for the college because of the number of students served relative to the number of instructors required).

Learning communities are team taught and have evolved to incorporate more and more collaborative, non lecture style classroom approaches. During the course of our grant we decided to make seminars a standard, regular part of all learning communities. For seminar, students and faculty study and then discuss a text -- usually a reading though sometimes a film, artwork, or other material -- and students turn in seminar papers on the text. The seminar discussion emphasizes student participation and development of the ability to have a sustained intellectual discourse on a subject -- to question, to disagree, to explore multiple meanings. Instructors often play a secondary role during seminars.

In the fall of 1995, we experimented successfully with offering a choice of levels of English (college composition or creative writing) within the same learning community. (This arrangement would have been impossible because of our evaluation design before this time; however, because this was the last learning community started it did not have a second run during the grant and therefore did not undergo the reading and writing test evaluation).

In the end, 20 faculty taught in 11 different learning communities, 7 of which were offered twice, for a total of 18 learning community classes.

The courses were initially offered simply as "linked classes" and identified by the two subject areas included. As the program progressed, the classes began to evolve around themes and were presented by their titles. All the learning communities offered with FIPSE support are listed below.

Fall 1992
College Composition + U.S. History*
College Composition + Child Development*

Spring 1993
College Composition + Introduction to Biology*
College Composition + Minority Group Relations

Fall 1993
College Composition + Minority Group Relations
College Composition + Western Civilization

Spring 1994
College Composition + Western Civilization
College Composition + Introduction to Political Science

Fall 1994
"Politics and Powerful Writing" (College Composition + Introduction to Political Science)
"Access to Energy" (College Composition + Nutrition)

Spring 1995
"Access to Energy" (College Composition + Nutrition)
"The Persistence of Memory" (College Composition OR Creative Writing+ Art History)
"Cruising the Information Highway" (College Composition + Introduction to Word Processing)
"Hoax or Healing?" (Critical Thinking + Nursing special topics: Introduction to Alternative Healing)

Fall 1995
"Sex: Biology and Psychology" (Biology of Sex + Psychology of Sex)

* the starred classes had been team-taught once before we received our FIPSE grant. Therefore, those classes were evaluated the first time they were offered with FIPSE support; those classes were not taught a second time during the grant.

We scheduled the classes with an eye to offering combinations that we thought would not compete with each other for students and with an emphasis on linking English with courses that fulfilled requirements to insure enrollment.

We also discovered that the exhaustion rate among learning communities faculty was high because of the amount of time required on a weekly basis to plan and coordinate class activities, so we instituted load credit for teaching teams to plan.

E. Evaluation/Project Results

Please see the Final Evaluation Report (attached) prepared by the evaluators and/or the highlights of evaluation results presented in the Executive Summary section of this report.

Two choices we made deserve description as cautionary tales to others who try similar projects.

1. The idea of incorporating multiple levels within a discipline in a learning community proved effective though somewhat troublesome to non learning communities faculty and administrators. Our experiment in this area was to offer a learning community in which students took an art history class and then chose either college composition or creative writing for their English credit (creative writing has college composition as a prerequisite, so students eligible for creative writing had by definition already taken and passed composition). This learning community was very successful from the viewpoint of students and faculty who felt everyone was richer from the exposure to different kinds of writing and different ways of looking at course material that resulted from the different emphases of the two English classes. For example, a creative writing student would point out a poetic writing technique in a text while students in composition might focus on an issue of structuring non fiction essays. However, one instructor outside the learning community was concerned that the material designated to be covered in the two different English classes would be compromised by the arrangement. These concerns were laid to rest by a presentation of the learning community instructors regarding their requirements, assignments, and class activities. Nonetheless, the experience of one faculty member questioning another was divisive and renewed the awareness of learning community teachers that the nature of what goes on in a learning community classroom can be difficult to understand and even threatening for instructors committed to a classroom where they exert sole authority and feel responsible for lecturing or otherwise presenting material to students rather than designing student-centered activities. Similar resistance came from some administrators and those in charge of curriculum. Administrators were concerned about how to represent learning communities in the schedule and whether or not the combining of different levels in one discipline made the learning community a new course and therefore in need of curriculum committee review and approval so that it would transfer to four-year institutions with whom our college has articulation agreements. These concerns were eventually laid to perhaps uneasy rest much as the concerns above were. This experience highlighted the degree to which learning communities challenge the structure and assumptions of the college and the bureaucracy in which it exists. Other problems, such as the huge amount of time, effort, and frustration involved in trying to get learning communities listed in the schedule of classes so that students could understand what the classes are, also arose from the same source -- learning communities do not "fit" easily in existing categories; they challenge us to think in a new way about what we teach and how.

2. Our choice to branch out into learning communities that did not include English also proved positive. It got a second member of the science department involved, helping to increase our presence in that area. In general, we have found that one effective way to engage those who are critical is to get them involved. Not everyone wants to teach in a learning community with its unique demands, but most faculty who attended one of our workshops or visited a class came away with an appreciation for the value of what we are doing.

Despite our successes in the two areas described just above, everything is not rosy. We continue to offer at least two learning communities each semester but meetings of the learning communities steering committee are long, tense, and many hours are spent talking about costs, the pressure to contain costs, and whether or not we can continue to justify the perceived added expense of learning communities. (Learning communities faculty liken these discussions to those about managed health care policies. No one thinks it's good for a new mother to be sent home after only a few hours or a day in the hospital, but the financial concerns of hospitals nonetheless continue to dictate such policies). We have been fortunate to find continued outside financial support from the college's Title III grant; however, the presence of these funds has kept us outside the regular budget of the college, so we remain vulnerable when that grant ends.

Because the business metaphor that dominates decision making at Solano is hostile to innovations like learning communities whose strengths are "cost effectiveness," the program's future is far from sure. Declining overall enrollments at the college are aggravating budget worries and fears of layoffs; "low-enrollment" programs like French and German are being cut back. Learning community faculty, meanwhile, feel the strain of remaining vigilant, continually having to defend the program in an atmosphere where other programs are being eliminated in favor of new programs that bring in more money. There is a sense of siege among learning communities faculty -- that every time we turn around we are besieged by new questions, obstacles, and threats to the program. We have compromised on enrollments to satisfy administrative concerns about cost. Learning communities now enroll 25 students per faculty member (so a faculty team with two members could enroll as many as 50 students and a three-person team could enroll 74). The teachers are concerned that these large enrollments will detract from the sense of community, making it hard for students to know each other and connect with faculty. Because 50 people are too many for a discussion, instructors must now, for example, each participate in a separate seminar group rather than being able to participate together with all students in one seminar. In addition, the larger enrollment means instructors cannot all see each student's work each time it is turned in, so instructors fall back on less integrated teaching methods -- the English teacher grades papers, the art instructor evaluates artwork -- as well as resorting to more sequential lectures -- the art instructor lectures on a subject and then the English instructor follows with a lecture on how to write effectively -- rather than group activities and discussion that are cumbersome with so many students. Another drawback of larger enrollments is that the learning communities are not filling up, and the classes are now more vulnerable to cancellation (the union contract at Solano provides that a class can be cancelled if it does not have 50 percent of its maximum enrollment).

Our evaluation efforts have been scaled back. We collect questionnaires from students and faculty about their experiences of each learning community, and we track retention, enrollment, grade, and transfer data for learning community students. Because learning communities do not necessarily now include English, measuring reading and writing skills is not the most relevant evaluation tool. It is also very difficult to find "control" or comparison students who are taking exactly the same combination of classes as offered in a learning community.

We continue to present activities during faculty development days and to promote the program, encouraging more faculty to get involved and propose new classes.

Solano has become known in California for learning communities. In addition to the presentations listed in our first and second year reapplication reports, learning communities

faculty and administrators from Solano have been invited to other colleges (Long Beach City College, September, 1995; Contra Costa Community College, October, 1995; Santa Rosa Junior College, May 1996) to give learning communities workshops. We have also have made a number of conference presentations including ones at the National Writing Across the Curriculum Conference and the national Conference on College Composition and Communication.

We are part of the planning team organized by California State University-Sonoma to start a center supporting interdisciplinary teaching and innovation in California, and we have become part of the learning communities directory complied by the Washington (state) Center for Improving the Quality of Undergraduate Education. Solano faculty have participated in three of the Washington Center's very effective summer learning communities for faculty. Our learning communities program is listed in *1001 Exemplary Practices in America's Two-Year Colleges* (McGraw-Hill, 1994).

F. Summary and Conclusions

We did not realize when we embarked on this project that we were effectively creating an alternative school within the college, with all of the well-documented advantages and problems that accompany such an effort. In his book *Public Alternative Education* (New York: Teachers College, Columbia University, 1990). Timothy W. Young summarizes characteristics of effective alternative secondary schools; our learning communities program exhibits all but one (and we could have learned a lot by identifying its omission sooner!). These assets of alternative schools are the same features that are causing friction with some faculty and administrators on campus. The characteristics of effective alternative schools according to Young (45) are:

1. Positive student-teacher relationships. Students could talk about nonacademic as well as academic subject matter with teachers.
2. Student-centered curriculum. Instruction was related to students' personal experiences.
3. Varied roles for teachers. Teachers served as advisors, attendance officers, and guidance counselors to meet a variety of student needs. [Elsewhere in the book Young refers to this as dealing with the "whole" student]
4. Noncompetitive classrooms. Peer cooperation and sharing were emphasized. Positive relationships among students were encouraged.
5. Clear mission. Schools targeted their students and tailored programs to fit their needs.
6. School size. Schools were small enough to allow students to feel part of a group yet large enough to provide necessary resources.

Up until we agreed to increase enrollments in learning communities, our classes exhibited characteristics 1-4 and 6; the intimacy and community spirit possible in a class of 30 students with two instructors using seminar and other collaborative learning activities produces these positive features, which are threatened by increasing class size. In addition, we have hurt ourselves by not attending to issue 5, a clear sense of which students we are targeting with our program. Although learning communities faculty have clear pedagogical intent in creating the classes, it is difficult to identify a target population within the diverse student body of a community college and difficult to appeal to students' needs when so many community college students feel like outsiders who do not belong in the academic world.

We have tried promoting learning communities for their sense of community and support ("make new friends, get to know your instructors"), their student-centered pedagogy ("less

lecture, more chances to ask questions and discuss material") and their academic excellence ("read real books, discuss interesting ideas, figure out how seemingly unrelated classes are related"). However, we are sending these messages into a diverse population of students and needs without defining a target audience more specifically than students who want something other than business as usual. Students looking for "something different" do not, in general, seem to be the students who choose our campus. Whether that is because of demographics and location, or because we don't effectively tell the community that we offer something different, we don't know. We have considered targeting our program or part of it toward students who need remedial/developmental classes; after our FIPSE grant ended we offered one successful learning community that incorporated developmental math with college-level nutrition and physical education, organized around a theme of changing oneself and one's attitudes. But we believe all levels of students can profit from learning communities, and our experiment with incorporating more than one level of English in a class suggests that classes of mixed levels may be more effective than those limited to one level of skill.

We could try to better define a target audience for our program. If we can effectively fill our classes to maximum enrollment, our administration will likely be less concerned about the perceived cost of learning communities. However, larger classes threaten the close relationships between teacher-student and student-student, the student centered, non competitive classroom activities and the small size that Young identifies above as prime assets of alternative programs. We need to find a way to address this conflict.

Despite the continued stresses and problems associated with the learning communities program, we feel it has been a success. Our evaluation shows more and better learning taking place in learning communities and faculty feel their teaching has been changed by the experience. None of this would have been possible without FIPSE's support.

G. Appendices:

1) **What forms of assistance from FIPSE were most helpful to you? How can FIPSE more effectively work with projects?**

Contact with program staff invaluable to us, both as we wrote our final application and as we carried out our project. We received excellent help from Dora Marcus in developing our evaluation plan as we wrote our final application; her assistance enabled us to make evaluation an integral part of the project from the outset rather than an add-on. Similarly, our program officer in years 2 and 3, Cari Forman, was an enormous help, listening carefully, and offering thoughtful suggestions and information about colleagues to consult at other schools and creative solutions to problems. Ms. Forman was genuinely interested in helping us find ways to make the project work when we ran into obstacles. She was efficient about returning calls and advising us through the reapplication and extension processes. If FIPSE could do one thing to insure effective support of projects, it would be to give program officers the time and permission to work closely and supportively with the grantees to whom they are assigned, as Ms. Forman has with us.

2) **What should FIPSE staff consider in reviewing future proposals in your area of interest? What are emerging new directions? What are key considerations, given your type of project?**

We needed all three years plus our one-semester extension to get our program to its current tentatively institutionalized state. Innovations that challenge the basic structure of an institution do not take hold quickly. Proposals like ours are, we think, much less likely to survive after a grant if they are funded for only a year.

More creative attention could be given to the workshop "So Now You Are A Change Agent" offered at the annual FIPSE conference., including more sharing of successful strategies other grantees and programs have used to garner support for programs that are alternative that challenge the structure and assumptions on which schools are founded. Workshops such as the one offered by education activist Parker Palmer on "Overcoming Institutional Gridlock" would be helpful.

In addition, we think FIPSE could help encourage rethinking of the structure and decision making assumptions of college administrations: perhaps workshops specifically targeted to administrators at schools where FIPSE grants are underway, helping them address the conflict between fiscal and qualitative concerns; perhaps FIPSE could tackle the issue of college administrative philosophies in an era of shrinking resources -- with a grant competition focused on fostering innovation in administrative strategies to support innovation in the classroom? Or an effort focused on alternatives to the "business" metaphor for managing colleges? (Many colleges like ours seem to be expanding middle management even as they cut teaching programs, following a business model that has already been discarded in the corporate world). We think the business/customer model of education is a dangerous "emerging direction," as colleges eliminate "non-profitable" programs in favor of "popular" ones. At community colleges in particular (at least in California), the availability of a rich, general liberal arts curriculum seems threatened by this philosophy of decision making.

FIPSE's support of innovation in teaching seems more and more important as the question of what is worth teaching calls out for new consideration in this era of tight budgets and reduction of government support for institutions like schools that serve the collective good.